

Soil Management Plan  
Facility Expansion  
540 Groton Road  
Westford, MA 01886



*Prepared for:*  
540 Groton Road Materials, LLC  
164 Burke Street Suite 102  
Nashua, NH 03060

*Prepared By:*  
Millennium Environmental  
197M Boston Post Road West #317  
Marlborough, MA 01752

*Dated:*  
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## **BACKGROUND**

The proposed project location is 540 Groton Road in Westford, Massachusetts and is identified as parcel numbers 11.234 & 11.250 on the Town Tax Assessors map 48. The subject site is located on the northern side of Groton Road along the Westford/Chelmsford Town Line. The total lot area contains 115.5 acres land, of which, 91.7 acres are located in the Town of Westford. The site is zoned Industrial A (IA) in both the Town of Westford and the Town of Chelmsford.

Historically, the site was used by the adjacent Fletcher Granite Quarry for materials processing and stockpiling. The lot is configured such that it surrounds the still active quarry parcel on three of its sides. The site has had a perpetually changing landscape of slag piles, quarry roads and excavations for the removal of overburden covering the granite deposit.

The site has approximately 895 feet of frontage along Groton Road in Westford and 20 feet in Chelmsford. The site is located approximately 2,000 feet west of the Route 3 interchange, exit 33, and 2,100 feet east of Whidden Corner, the intersection of Groton Road and Oak Hill Road. The majority of the frontage is adjacent to a large wetland area located in the southeast corner of the parcel. Currently, the site is comprised of an existing solar farm, a material processing area, a contractor's yard, a material storage area, an office use area, and a retail loam pile. Access to the site is gained from an existing paved drive located in the southwest corner of the lot. The access road widens at the entrance along Groton Road into two distinct turning lanes which are separated by a landscaped island that includes a utility pole and sign. The paved driveway is 22-foot wide and extends approximately 1,100 feet onto the site to the parking lot for the existing 14,000 square-foot building. The paved parking area for this building includes approximately 56 parking spaces and provides access to all sides of the structure. Site access extends further into the site as a gravel road approximately 4,000 feet in length and loops around the Fletcher Quarry to the north and west.

The proposed project includes the clearing of trees within the 100' wetland buffer to provide more area for removal of sandy soil to be processed at the facility and filling / stockpiling of and on the excavation area. No clearing or disturbance will take place within 50' of the wetlands, or 100 around the potential vernal pool as indicated on the site plans. There will be no new impervious area added as part of the proposed tree clearing project. The project will include semi-permanent placement of silt fence along the new tree line and will serve as a visible and physical barrier between the work area and buffer zone. Stormwater controls are also proposed to attenuate peak rates of runoff.

It is anticipated that the reclamation project will take approximately 1.5 years to complete based upon the size of the area to be excavated / filled, projections of volumes of fill material likely available, and anticipated daily operations at the site.

A Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) were prepared and implemented in accordance with USEPA NPDES requirements for a Construction General Permit disturbing over 1 acre of land. A copy of the Stormwater Management Report, Operations and Maintenance Plan along with the e NOI is included in Appendix A.

An Order of Conditions was issued for the project by the Town of Westford Conservation Commission and is included as Appendix B

### **Topography, Geology and Soils**

The topography of the site consists of a wide and varied scheme. The majority of the site has been disturbed with massive stock piles of rock and dirt. Portions of the site along the town line are relatively flat with a gradual 2-percent slope directing runoff to the adjacent wetlands. The undeveloped portions of the property consist of mostly wetlands, are relatively flat and include several old quarry excavations. Approximately 45 acres of the parcel is wooded with a mixture of oak and pine trees. The highest elevation on the site exists in the northwest corner of the property and is approximately 268 feet (NAD 1988) and the lowest elevation on the site exists at the edge of the wetland along Groton Road and is 162 feet (NAD 1988).

The Natural Resources Conservation Service (NRCS) Soil survey of Middlesex County, Massachusetts defines the soils on the project site. Several different soil types exist within the proposed project area and have associated hydrologic soil groups of 'A', 'B', and 'D'. Appendix A contains a Stormwater Management Report prepared by LandTech Consultants further defining the soils within the analyzed area.

On November 6, 2015 and November 9, 2015, LandTech Consultants performed soil testing within the area of proposed infiltration systems in order to confirm the soil type and to determine the depth to estimated seasonal high groundwater (ESHGW). Twenty (20) test pits were dug in all and the soil type was determined to be consistent with the NRCS soil mapping. ESHGW was found to be approximately 24" below existing grade. No bedrock was encountered in any of the test pits which were each a minimum of 6' deep. Soil logs and a site map are included in the Stormwater Management Report noted above.

### **Groundwater Monitoring**

A total of four (4) groundwater wells MW-1, MW-2, MW-3, MW-4 will be installed as shown on the construction drawings included herein to establish background levels in groundwater at the project site and to complete annual monitoring of the groundwater. The approximate locations of the wells are shown on the enclosed Drawing 9996, Sheet CP-1. Seasonal high groundwater elevations was found to be approximately 24" below existing grade in most test pits. Based on the measured groundwater elevations, groundwater flow appears to be from west to east across the site.

The wells will be sampled using low-flow sampling procedures and samples will be submitted for analysis for the presence of polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), total MCP - 14 metals, volatile organic compounds (VOCs), herbicides, pesticides, and extractable petroleum hydrocarbons (EPH).

The groundwater monitoring wells will be sampled on an annual basis for the above referenced parameters through the duration of the project. The results of the sampling data will be added to this plan as Appendix D as obtained. A final sampling event will be performed two (2) years after completion of the project.

**PARTIES INVOLVED**

Several parties will be involved with the placement of fill material associated with the project at 540 Groton Road

**Soil Acceptance and Facility Oversight:**

Millennium Environmental, Inc.  
197M Boston Post Road West #317  
Marlborough, MA 01752

**Approval of Submittal Packages:**

Spectrum Environmental Services, Inc.  
11 Walkup Rd  
Sudbury, MA 01776  
Project LSP: Keith W. Veren (LSP), Registration No. 7343  
(978) 443-4600

**Filling Operations:**

540 Groton Road Materials, LLC  
20 Commerce Way  
Westford, MA

**Property Owner:**

540 Groton Road, LLC  
20 Commerce Way  
Westford, MA

## SOIL ACCEPTANCE CRITERIA

Soil Acceptance Criteria has been established for various constituents in soil intended for use as fill material at the 540 Groton Road site. The criteria were based on review of available and applicable soil standards, guidelines, values, criteria, and background levels established by MADEP in various regulations, guidelines, and MADEP technical guidance documents including the Interim Policy on the Re-Use of Soil for Large Reclamation Projects, Policy #COMM-15-01 dated August 28, 2015, the Similar Soils Provision Guidance WSC#-13-500 dated September 4, 2014 (Similar Soils Guidance) and concentration ranges of typical contaminants detected in historic urban fill, naturally-deposited soil, Boston Blue Clay, and other soil. The Acceptance Criteria were established to be protective of surrounding natural resource areas including nearby wetland areas.

### Groundwater Classification

The site is not located within a Current Drinking Water Source Area:

- (a) MassDEP Phase I Site Assessment Map (see Figure 1) and MassGIS mapping (see Figure 4) shows the site is not located within the Zone II for a public water supply;
- (b) MassDEP Phase I Site Assessment Map shows the site is not within the Interim Wellhead Protection Area for a public water supply;
- (c) A review of MassGIS mapping and the MassDEP Phase I Site Assessment Map shows the site is not within the Zone A of a Class A surface water body used as a public water supply; and
- (d) A review of the Town of Westford, Board of Health drilling permits shows the site is not within 500 feet of a private water supply well.

The site is not located within a Potential Drinking Water Source Area:

- (a) A review of the Town of Westford utilities shows the property is within 500 feet of a public water supply distribution pipeline located on Route 40 / Groton Road;
- (b) The property is not within an area designated by the municipality specifically for the protection of groundwater quality to ensure its availability for use as a source of potable water supply. There is no local ordinance or bylaw adopted by the municipality for protection of groundwater at the site, there is no inter-municipal agreement approved by the Town of Westford and no executed inter-governmental contract for the purchase or sale of drinking water derived from the site; and
- (c) MassGIS mapping shows the property is not within a Potentially Productive Aquifer that has not been excluded as a Non-Potential Drinking Water Source Area. This is a non-potential Drinking Water Source as this groundwater underlies land which has been developed for heavy industry as of January 1, 1996. This Industrial Zoning Area has been in industrial use (granite quarrying and material processing) for over 120 years encompassing an area greater than 100 acres.

Accordingly, the site is not subject to RCGW-1 reporting criteria.

#### Additional Considerations

A review of the Massachusetts Natural Heritage & Endangered Species Program (NHESP) online database was conducted. The property is not located within a mapped Priority Habitat for Rare Species or an Estimated Habitat for Rare Species. Further, there is a potential vernal pool mapped at this property, however, it is not within the project site.

#### Chemical Criteria

Chemical constituents within candidate soil must be less than established Acceptance Criteria. Criteria were established for the following: MCP-14 Metals (pursuant to DEP Policy #COMM-15-01, Semi-volatile Organic Compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), Volatile Organic Compounds (VOCs), Polychlorinated Biphenyls (PCBs), pH / corrosivity, Specific Conductance, Moisture Content / Free Liquids, Reactivity (cyanide and sulfide), Ignitibility/Flash Point, Herbicides, Pesticides, and other potential constituents based on location-specific history.

Reporting limits for laboratory tests must be appropriate and adequate for evaluation and comparison to Acceptance Criteria. MADEP CAM methods and levels must be utilized for all CAM analytes.

Averaging of concentrations will not be allowed to meet Soil Acceptance Criteria. Soil containing a constituent at a concentration equal to or exceeding Soil Acceptance Criteria will not be accepted. All soil must meet Soil Acceptance Criteria as established herein.

#### Visual, Olfactory, and Field Screening Criteria

All soil intended for reuse in the 540 Groton Road as filling and grading material will meet visual, olfactory and field screening criteria prior to being accepted and/or placed. Visual inspection of soil is to be performed at time of soil borings, test pits, stockpile sampling, at time of excavation, and/or upon arrival at the project site prior to acceptance and placement. 540 Groton Road Materials, LLC will have an authorized representative on-site on a full time basis to observe off-loading of trucks and perform visual inspections of soil.

Soil will exhibit no indication of staining or other discoloration indicative of a release or impact of oil or hazardous material or other nuisance conditions. Soil and fill materials approved for use at the property shall contain no more than 5% by volume Asphalt, Brick and Concrete (“ABC”) material. Any such ABC material must measure less than 6 inches in any dimension and acceptance of such soil will be considered on a case-by-case basis. Soil and fill materials approved for use at the property may contain only incidental, randomly dispersed, de minimus quantities of ash and/or Solid Wastes, as defined in 310 CMR 16.00 and 310 CMR 19.00, collectively present at less than 1% by volume.

Loads arriving with material not meeting acceptance criteria or determined to contain contaminants at levels at or exceeding acceptance criteria based on quality assurance/quality control sampling will be rejected and removed from the 540 Groton Road site at the expense of the Generator of that material. Loads not meeting acceptance criteria at the time of delivery to the project site due to debris, odors, or other nonconformance with Acceptance Criteria will be rejected prior to off-loading or reloaded immediately by the facility operator. Such loads will be removed from the project site immediately in the truck they were delivered in.

Should testing or observations indicate soil as delivered is not below Acceptance Criteria, then the

Generator of that soil and the party contracting with 540 Groton Road Materials, LLC for placement of soil will promptly remove such soil from the project site at a maximum not to exceed seven (7) days. Additional soil will not be accepted from a source where soil failed a QA/QC test or soil was rejected by the facility upon arrival, until appropriate resolution is reached. If the Generator of the soils fails to act, the rejected soil will be removed from the site within this seven day period by 540 Groton Road Materials, LLC.

Soil will contain no nuisance odors such as petroleum, chemicals, solvent, and/or organic material/hydrogen sulfide as described on soil boring or test pit logs, stockpile sampling plans, and/or upon arrival at the project location. Soil with natural organic/hydrogen sulfide odor that is mixed with an odor reducing agent at the location of origin will be evaluated on a case-by-case basis. The Safety Data Sheet (SDS) for all odor reducing products is required with soil submittal packages.

Soil must be field screened for Total Organic Vapors following the MADEP Jar Headspace Screening Procedure (MADEP Policy #WSC-94-400, modified to be based upon an isobutylene response factor rather a Benzene standard) at time of sample collection from borings, test pits, stockpiles or other locations or at the time of excavation and loadout. Soil must also be field screened at the time of excavation and load out to the 540 Groton Road site at a frequency of 1 field screening test per approximately 50 cubic yards of soil. These samples shall be preferentially obtained from soils displaying signs of contamination, such as discoloration or odors, if present. Soil must contain less than 5 parts per million volume (ppmv) total organic vapors (TOV) above ambient background by the jar headspace screening procedure to meet Acceptance Criteria. Natural organic soils which exhibit TOV screening levels above 5 ppmv may be considered for acceptance on a case-by-case basis provided the following:

- results of analytical testing, particularly VOC analysis, for the soil that exceeded the 5 ppmv TOV value identifies no exceedances of acceptance criteria; or
- source of elevated TOV screening levels can be attributed to a source other than oil or hazardous material (such as hydrogen sulfide interference on PID).

Soil mixed with bentonite or other slurry material will be accepted on a case-by-case basis. A description of the process and materials generating the soil with slurry must be provided. The SDS for all slurry and additive products must be submitted for review. If needed, pH must be adjusted to meet Acceptance Criteria prior to arrival at the fill site. Soil with slurry mixture is subject to field screening for pH upon arrival at the fill site and subject to rejection if Acceptance Criteria are not met.

Soil will contain no free liquid at the time of loading or upon arrival at the project site. Soil containing free liquid will be rejected upon arrival and inspection.

#### Source Site History and Use Criteria

Relevant site history and uses of each soil origin/source with regard to the presence, use, disposal, and/or release of oil or hazardous material must be provided in submittal packages prior to acceptance at 540 Groton Road. Reports including MCP phase reports, URAMs, RAMS, LRAs, ASTM Environmental Site Assessment Reports, or similar documentation must be submitted and will be reviewed with regard to suitability of soil as fill material for this project.

Soil that meets the definition of Remediation Waste as defined in Section 40.0032 of the MCP will **not** be



considered for reuse at the 540 Groton Road Project site.

### **Soil Sampling Approach**

A composite approach is preferred in obtaining samples for chemical analysis. Each composite sample subjected to chemical testing should be comprised of at least 5 to 10 sub-samples obtained throughout the area/volume being evaluated. However, in no case shall soil displaying apparent signs of contamination (i.e., staining, discoloration, odors, or elevated PID readings) be composited/mixed with soils that do not display these signs. If present, these suspicious soils shall be sampled or composited for separate analyses.

An LSP or other qualified environmental professional must justify the representativeness and usability of any testing data obtained from discrete soil samples or composite samples with less than 5 sub-samples.

### **Soil Chemical Testing Requirements**

Testing is required on soil proposed for acceptance as fill material from sources such as developed areas with historic urban fill soil, locations identified as an MCP Disposal Site or other oil or hazardous material release or spill locations, locations with history of manufacturing or industrial use, locations with current or past chemical or petroleum storage, or soil known to contain naturally-occurring elevated levels of metals including Boston Blue Clay and soil from Worcester County with arsenic.

Upon review of initial submittal package information from a soil source, source-specific supplemental testing of specific areas for specific contaminants where the proposed soil is adjacent to other soils with exceedance(s) of acceptance criteria to define/confirm limits of acceptable soil may be required at the discretion of the reviewing LSP prior to acceptance of proposed soil.

### Required Test Parameters

Test parameters required on soil to be considered for acceptance include:

- Volatile Organic Compounds (EPA 8260 with methanol preservation)
- Semi-volatile Organic Compounds (EPA 8270 full list)
- Metals: MCP 14 metals
- PCBs
- Total Petroleum Hydrocarbons (summation of EPH Fractions may be substituted)
- Hexavalent Chromium if Total Chromium > 100 mg/kg
- pH/Corrosivity
- Specific Conductance (conductivity; may be limited based on site history)
- Field Screening for Total Organic Vapors (PID following MADEP Jar Headspace Screening Procedure based upon an isobutylene response factor)
- Herbicides (may be excluded or limited based on site history)
- Pesticides (may be excluded or limited based on site history)
- Ignitibility/Flash point (may be excluded or limited based on site history)
- Reactive Cyanide (may be excluded or limited based on site history)
- Reactive Sulfide (may be excluded or limited based on site history)
- TCLP for any analyte exceeding EPA TCLP Trigger Values (20 times rule)
- Others as deemed prudent based on soil source site history.

Current and appropriate versions of applicable methods are to be used in accordance with MADEP Compendium of Analytical Methods. Reporting limits for analyses must be appropriate for comparison to Acceptance Criteria. Generator and Qualified Environmental Professional/LSP must ascertain data is appropriate for use as intended.

Required Chemical Testing and Frequency

Initial testing is required at the minimum frequencies below. Additional testing may be required for the following situations when an Acceptance Criteria is exceeded within or in proximity to soil requested for reuse at 540 Groton Road:

Source/Origin Description		Minimum Sampling Frequency
<b>1</b>	<p><b>Naturally Deposited Soils</b> Not from an area of known or suspected high background levels of metals, No / not proximate to urban fill soil, No / not proximate to MCP Disposal Site No industrial/commercial history No agricultural history with likely pesticide / herbicide use</p>	<p><b>No testing required with Generator and Qualified Environmental Professional / LSP Statement</b> including documentation of site background / area conditions.</p>
<b>2</b>	<p><b>Boston Blue Clay, Marine Soils, and other naturally-deposited soils from known or suspected areas of elevated metals.</b> Not / not proximate to urban fill soil, Not / not proximate to MCP Disposal Site No industrial or manufacturing history No agricultural history with likely pesticide / herbicide use</p>	<p><b>1 test profile per 1,000 cubic yards (1,500 – 1,700 ton).</b>  If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of <b>1 sample/100 cubic yards</b> to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.</p>
<b>3</b>	<p><b>Urban Fill Soil</b> Historic Fill and other soil in areas where impacts would be expected from lead paint, oils, pesticides/ herbicides use, and other anthropogenic activities. No industrial or manufacturing history</p>	<p><b>1 test profile per 500 cu yds (750-850 ton).</b>  If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of <b>1 sample / 100 cubic yards</b> to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.</p>

Source/Origin Description		Minimum Sampling Frequency
<b>4</b>	<p><b>Industrial Soils</b> - Soil from current or former Industrial, Commercial, or Manufacturing site with history of Tannery, Textiles, Chemical/Paint Production, Circuit Board manufacturing, Plating/Metal finishing, Foundry operations, Coal Gasification, Dry Cleaning, Salvage Yards, or Herbicide / Pesticide use, storage or distribution facilities.</p> <p><b>No soil or fill shall be obtained from or immediately contiguous to such locations unless an LSP, LSRP, or LEP provides a report detailing why such soils conform to acceptance criteria.</b></p>	<p>Minimum <b>1 test profile per 500 cu yds</b> (750-850 ton).</p> <p>If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of <b>1 sample/100 cubic yards</b> to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria. Additional test parameters such as cyanide must be included as appropriate.</p>
<b>5</b>	<p><b>Other</b> - Soil from source not otherwise described above where historic test data indicate exceedance of Acceptance Criteria, or where past use or site history indicated use or storage of oil or hazardous materials at more than household quantities, or use of pesticide/herbicides</p>	<p>Minimum <b>1 test profile per 500 cu yds</b> (750-850 ton).</p> <p>If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of <b>1 sample/100 cubic yards</b> to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.</p>
<p><b>The more conservative sampling protocol shall apply to soils that meet more than one of the above</b></p>		

Analytical results for VOCs, Semi-VOCs, metals, PCBs, EPH/TPH, and Herbicides/Pesticides must be expressed on dry-weight basis. If a proposed shipment of soil falls into more than one category, the more conservative sampling protocol shall apply.

Test Data Quality and Usability

Test data provided for review and acceptance must be considered current. If aged data (greater than one (1) year old) is to be utilized for acceptance, then a statement from the qualified environmental professional making the submittal must be provided indicating site conditions have not changed since collection of data and that no documented releases that may impact site conditions have occurred since data was collected.

Prior to submittal, the environmental professional making the submittal must perform a QA/QC evaluation of the data to document that data is representative and usable for its intended purpose. This evaluation must include a justification of the representativeness of analytical data obtained for discrete soil samples or composite samples with less than 5 sub-samples.

**Table 1 – Acceptance Criteria**

Parameter Analyzed	Concentration In "Natural" Soil	MCP <RCS-2 Reportable Concentrations	Acceptance Criteria
<i>MCP 14 Metals (mg/kg)</i>			
<i>Antimony</i>	1	30	<10
<i>Arsenic</i>	20	20	<20
<i>Barium</i>	50	3,000	<375
<i>Beryllium</i>	0.4	200	<4
<i>Cadmium</i>	2	100	<20
<i>Chromium (Total)</i>	30	200	<200
<i>Chromium (III)</i>	30	3,000	<225
<i>Chromium (VI)</i>	30	200	<200
<i>Lead</i>	100	600	<500
<i>Mercury</i>	0.3	30	<3
<i>Nickel</i>	20	1000	<150
<i>Silver</i>	0.6	200	<6
<i>Selenium</i>	0.5	700	<5
<i>Thallium</i>	0.6	60	<6
<i>Vanadium</i>	30	700	<225
<i>Zinc</i>	100	3,000	<500
<i>Total VOCs (mg/kg)</i>	NA	NA	<10% RCS-1 or 0.1 mg/kg <sup>1</sup>
<i>SVOCs - Targets (mg/kg)</i>			
<i>Acenaphthene</i>	0.5	3000	<5
<i>Acenaphthylene</i>	0.5	10	<5
<i>Anthracene</i>	1	3,000	<10
<i>Benzo(a)anthracene</i>	2	40	<20
<i>Benzo(b)fluoranthene</i>	2	40	<20
<i>Benzo(a)pyrene</i>	2	7	<7
<i>Benzo(k)fluoranthene</i>	1	400	<10
<i>Benzo (g,h,i)perylene</i>	1	3,000	<10
<i>Indeno(1,2,3-cd)pyrene</i>	1	40	<10
<i>Chrysene</i>	2	400	<20
<i>Dibenzo(a,h)anthracene</i>	0.5	4	<4
<i>Fluoranthene</i>	4	3,000	<40
<i>Fluorene</i>	1	3,000	<10
<i>2-Methylnaphthalene</i>	0.5	80	<5
<i>Naphthalene</i>	0.5	20	<5
<i>Phenanthrene</i>	3	1,000	<30
<i>Pyrene</i>	4	3,000	<40

Parameter Analyzed	Concentration In "Natural" Soil	MCP <RCS-2 Reportable Concentrations	Acceptance Criteria
<i>PCBs (mg/kg)</i>	NA	3	< 0.1
<i>TPH (mg/kg)</i>	815 <sup>-2</sup>	3000	<815
<i>Waste Characteristics</i>			
<i>pH (Corrosivity)</i>	NA		5-9 typical, 4-11 considered
<i>Reactive sulfidey (mg/kg)</i>	NA		<500
<i>Reactive cyanide (mg/kg)</i>	NA		<250
<i>Herbicides and Herbicides</i>	NA		<10% RCS-1 or 0.05 <sup>3</sup>
<i>Free Liquid/Paint Filter Test</i>	NA		No Free Liquid
<i>Flashpoint (Degrees F)</i>	NA		>140
<i>Conductivity (umhos/cm)</i>	NA		<2,000

**Notes:**

1. VOCs shall be less than 10% of their RCS-1 value or 0.1 mg/kg, whichever is greater.
2. Maximum TPH from site background sampling
3. Pesticides and Herbicides shall be less than 10% of their RCS-1 value, or 0.05 mg/kg, whichever is greater

## SOIL SUBMITTAL PROCESS

A soil submittal package must be provided by representatives of each soil source/origin for review and approval by representatives of 540 Groton Road Materials, LLC. A complete submittal package will be forwarded to:

Millennium Environmental, Inc.  
197M Boston Post Road West #317  
Marlborough, MA 01752  
Attention: Alan B. Duncan  
617-653-4067  
aduncan@megi2000.com

Millennium will perform an initial review to establish whether the submittal is complete and soil is appropriate for reuse as fill material at 540 Groton Road. The submittal will then be assigned an Acceptance Code and forwarded to the site LSP under contract to Millennium to complete a final review and approval.

An LSP Opinion is required for proposed soil shipments that originate from RCS-1 locations if that soil exhibits one or more constituents at concentrations that exceed the applicable RCS-1 standards but are below the RCS-2 standards and Acceptance Criteria. The LSP Opinion shall demonstrate, pursuant to the provisions of the MCP that the proposed soil which may exhibit the presence of constituents at concentrations greater than the RCS-1 standards is exempt from the notification requirements of the MCP and is not otherwise considered Remediation Waste.

Upon completion of the submittal review process and determination that soil meets acceptance criteria, an Acceptance Letter will be issued. The Acceptance Letter will reference the assigned Acceptance Code, will state a review of information as provided was performed and found adequate and appropriate for acceptance, the quantity of soil that is approved, any samples/soils that are not acceptable, and any other conditions applicable to the acceptance of applicable the soil. Soil submittal packages and Approval Letters will be retained by Millennium.

A complete submittal package must contain the following:

- Soil / Site information (see Appendix C);
- LSP/QEP Opinion Letter stating relevant site history and use, and a statement that the soil requested for acceptance at 540 Groton Road meets Acceptance Criteria established in this plan;
- Appropriate Shipping Papers signed by an LSP/Qualified Environmental Professional and the Generator;
- Laboratory test data reports with Chain of Custody and QA/QC for the soil samples intended for reuse at 540 Groton Road;
- A Data Summary Table comparing soil test data to the 540 Groton Road Acceptance Criteria; and
- Supplemental site investigation reports or information supporting acceptance of subject soil at 540 Groton Road.

Copies of soil submittal form is included in Appendix C. Soil Acceptance Criteria for use in a data comparison table are listed in Table 1.

The assigned Acceptance Code must be placed at the top of each page of the intended shipping papers. Trucks will not be allowed access to the 540 Groton Road site without an Acceptance Code on shipping papers.

**SITE ACCESS, QUANTITY DETERMINATION AND SITE REJECTION OF MATERIAL**

Directions to the site are:

- Take Rt. 3 North toward the New Hampshire border
- Exit Rt. 3 North at Exit 33 on to Route 40 East (Groton Road) towards Westford.
- Travel east on Rt. 40 for 0.35 miles to the entrance at 540 Groton Road
- Proceed onto Commerce Way (paved access road located at 540 Groton Road) for 800 feet to the entrance of the facility.

Trucks will be weighed at the onsite certified scale to determine the quantity of soil delivered. Access will be through the access road into the Site and roadways will be maintained for truck access. Hours of operation are 7:00 am to 4:00 pm from Monday to Friday.

The owner maintains the appropriate equipment year-round to spread, dry, process and compact the soils.

Loads deemed unacceptable by the Facility Operations Personnel will be rejected from the site. No additional loads will be accepted from the source in question until the Generator, Generator's LSP and the party contracting for placement of soil at 540 Groton Road, provide appropriate explanation and assurance that no additional similar loads will be delivered to the project site.



#### **INDEPENDENT THIRD PARTY**

540 Groton Road Materials, LLC will retain the services of a qualified, independent individual (the "Independent Third Party") to perform monthly inspections of the Property for compliance with the requirements of the facility Consent Order including, but not limited to, the Soil Management Plan, the National Pollution Discharge Elimination System ("NPDES") Multi-Sector General Permit, and Grading Plan. The Independent Third Party must hold certification as a Massachusetts Registered Professional Engineer or as an LSP, and must be approved, in writing, by MassDEP. The facility shall be responsible for the timely performance of the activities required of the Independent Third Party in the facility Consent Order.

The Independent Third Party inspections shall be unannounced and randomly timed during normal operating hours. During each inspection, the Independent Third Party shall, at a minimum:

1. Observe the practices involved in the receipt and/or placement of soil and fill materials at the Property, to the extent that such activities are occurring;
2. Inspect the soil and fill materials that are being unloaded and/or placed during the inspection, if any, and inspect all areas of the Property where soil and fill materials have been placed since the previous inspection;
3. Collect a grab sample of any area or load of soil that appears to be contaminated, based upon staining, discoloration, odors, or PID readings. If no area or load appears to be contaminated, collect a composite soil sample from a minimum of one load of soil being delivered or recently delivered to the Property and submit the collected samples to a laboratory for the soil profile analyses specified in the Soil Management Plan. The composite sample shall consist of a minimum of 5 to 10 subsamples from the load(s) under evaluation.
4. Inspect all erosion control measures including but not limited to, silt fence, hay bales, temporary basins and swales.

The Independent Third Party shall have the authority and shall immediately stop work on the Project for any noncompliance with the approved Soil Management Plan and immediately notify MassDEP. The Independent Third Party shall prepare an inspection report documenting the findings for each inspection and shall submit such report to the Facility Operators and MassDEP on or before the 15th of each month. Each inspection report shall include, but not be limited to:

1. Observations of practices that are not compliant with the SMP and/or Consent Order;
2. Observations of solid or hazardous waste, stained soils, odors and sheens;

3. The results of the soil testing of the soil samples collected during the inspection, including, but not limited to the following, providing that the testing results for a given inspection may be submitted in the next monthly report if not available for submittal with the inspection report:
  - a. A copy of the Material Shipping Record or Bill of Lading for the load of soil that was sampled during the inspection, if any; and
  - b. The analytical results in a tabular format comparing the results to the applicable RCS-2 Reportable Concentrations and Acceptance Criteria identified in the Soil Management Plan.
  - c. A clear statement regarding whether any of the Acceptance Criteria were exceeded; and
  - d. The laboratory analytical reports and chain of custody documentation.
4. Observations on airborne dust and dust control measures employed;
5. Specific recommendations for repair, replacement or changes to erosion control measures at the property; and
6. Status updates of actions taken by Respondent to implement the recommendations made in prior inspection reports, if any.

Loads of soil selected for monthly sampling performed by the independent third party inspector will be segregated pending receipt of test results. Should the test results indicate that contaminants detected in soil are not below all Acceptance Criteria, then arrangements must be made promptly by the Generator and/or party contracting for soil placement to immediately remove that soil from the 540 Groton Road site. If the Generator and/or party contracting for soil placement fail to promptly remove unacceptable soil, then 540 Groton Road Materials, LLC will remove the soil from the project site within 7 days and manage the soil at an appropriate location. 540 Groton Road Materials, LLC will seek recovery from the Generator and/or party contracting for soil placement for all costs associated with removal of any unacceptable soil from 540 Groton Road.

#### **MONTHLY REPORT SUBMITTALS TO MASSDEP**

Monthly reports shall be submitted electronically to MassDEP by the 15<sup>th</sup> of each month, using eDEP Transmittal Form BWSC 126, Section B(2), under a Release Tracking Number (RTN) that will be issued by MassDEP for the site.

The monthly reports shall include the following:

1. The total tons of soil received by the site in the previous month; the total tons of soil received by the site since the signing of the Consent Order; and the estimated total tons of capacity remaining at the site;
2. A tabulation showing the origin/addresses of the sources of soil received during the previous month:
  - a. for each address, the total tons received for the month
  - b. for each address, a notation on whether the required PID screening at 1 sample/50 yd<sup>3</sup> was conducted at the point of generation or point of unloading at the facility, and affirmation that soil with headspace concentrations > 5 ppmV was either rejected or approved after further evaluation by an LSP.
3. A notation on any problems or issues experienced during the previous month; any noteworthy activities expected in the upcoming month, and any significant changes in the project design, schedule, or on-property contact persons
4. The report from the Independent 3<sup>rd</sup> Party Inspector